

CBCS SCHEME

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BCV303

Third Semester B.E/B.Tech. Degree Examination, Dec.2024/Jan.2025

Engineering Geology

Time: 3 hrs.

Max. Marks:100

**Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.**

| Module – 1 | | | M | L | C |
|------------|----|--|----|----|-----|
| 1 | a. | Explain importance of geology in Civil Engineering. | 5 | L2 | CO1 |
| | b. | Describe internal structure of earth with labelled sketch. | 10 | L2 | CO1 |
| | c. | What is land slide? Explain causes at landslides. | 5 | L1 | CO1 |
| OR | | | | | |
| 2 | a. | Discuss causes and effect of earthquake. | 7 | L2 | CO2 |
| | b. | What is Tsunami? Add a note on mitigation of Tsunami. | 7 | L3 | CO3 |
| | c. | Explain causes and types of volcanoes. | 6 | L2 | CO2 |
| Module – 2 | | | | | |
| 3 | a. | What is mineral? Explain properties of mineral. | 8 | L2 | CO2 |
| | b. | Explain different types of igneous rocks. | 6 | L2 | CO2 |
| | c. | What is metamorphism? Discuss types of metamorphism. | 6 | L2 | CO2 |
| OR | | | | | |
| 4 | a. | Describe properties of following minerals : i) Orthoclase ii) Biotite iii) Haematite. | 6 | L2 | CO2 |
| | b. | Enumerate stages of development of sedimentary rock. | 7 | L2 | CO2 |
| | c. | Discuss important uses of different rock type. | 7 | L2 | CO2 |
| Module – 3 | | | | | |
| 5 | a. | With a neat sketch explain soil profile. | 7 | L2 | CO3 |
| | b. | What is weathering? Explain types of weathering. | 8 | L2 | CO3 |
| | c. | Discuss classification of different soil type. | 5 | L2 | CO3 |
| OR | | | | | |
| 6 | a. | Explain classification of soil based on grain size. | 7 | L2 | CO3 |
| | b. | Discuss the effect of weathering on monumental rock. | 7 | L2 | CO3 |
| | c. | Write a note on : i) Drifted soil ii) Laterite soil. | 6 | L1 | CO3 |

Module – 4

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|---|----|--|---|----|-----|
| 7 | a. | Explain different rock deformation and causes. | 8 | L2 | CO4 |
| | b. | A bed of lime stone is dip 25° East and it has width of outcrop – 160 m. Determine true and vertical thickness. | 6 | L3 | CO4 |
| | c. | What is fault? Explain type of fault. | 6 | L2 | CO4 |

OR

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|---|----|---|---|----|-----|
| 8 | a. | Discuss feasibility of Dam site in folded and faulted region. | 7 | L2 | CO4 |
| | b. | A bed of shale is dipping maximum of 45° along S 60° E. Determine the amount and apparent dip along S 70° E. | 6 | L2 | CO4 |
| | c. | Write a note on : i) Dip and strike ii) Out crop. | 7 | L2 | CO4 |

Module – 5

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|---|----|---|---|----|-----|
| 9 | a. | Explain different water bearing formations. | 8 | L2 | CO5 |
| | b. | What an Aquifer? Discuss types of aquifer. | 8 | L2 | CO5 |
| | c. | Write a note on co-efficient of permeability. | 4 | L1 | CO5 |

OR

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|----|----|---|----|----|-----|
| 10 | a. | Explain electrical resistivity survey method in ground water exploration. | 12 | L2 | CO5 |
| | b. | Discuss factors affecting on permeability of rocks. | 8 | L2 | CO5 |
